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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,213	07/06/2001	Aedan Diarmuid Cailean Coffey	ERLG.P023	6273

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EXAMINER	
MAURO JR, THOMAS J	
ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/900,213	COFFEY ET AL.
	Examiner	Art Unit
	Thomas J. Mauro Jr.	2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20030421, 20040602*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-9 are pending and are presented for examination. A formal action on the merits of claims 1-9 follows.

Specification

2. The disclosure is objected to because of the following informalities: numerous spelling errors exist throughout the specification and claims.

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,629,062. Although the

conflicting claims are not identical, they are not patentably distinct from each other because both recite analogous methods for monitoring performance information in a storage enclosure.

For example, claim 1 of the instant application recites a means for extracting data from the fibre channel, means for processing extracted data, and a means for communicating processed data to an environmental control and monitoring unit through a secondary communication bus. Similarly, claim 1 of U.S. Patent No. 6,629,062 recites means for extracting data from a bus, means for processing extracted data, and a means for communicating processed data to an environmental control and monitoring unit through a secondary communication bus. Therefore, because the fibre channel is a type of bus, it is obvious that such a bus could be used in order to monitor a common bus architecture for storage enclosure systems.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Martinez et al. (U.S. 6,188,973).

With respect to claim 1, Martinez teaches a fibre channel analyzer for analyzing the operation of a fibre channel arbitrated loop (FC-AL) to which a plurality of devices are connectable, said analyzer being adapted to be housed in an enclosure which, in use, houses at least one of said devices **[Martinez -- Abstract, Figure 1, Col. 5 lines 12-25 and Col. 6 lines 12-17 – FC-AL loop of cabinet is monitored by an environmental monitoring unit, i.e. analyzer, housed in enclosure, i.e. cabinet, with devices, i.e. disk drives]** and comprising:

means for extracting and processing the extracted data from the fibre channel **[Martinez -- Figure 6, Col. 5 lines 12-25, Col. 6 lines 12-17 and lines 30-39, Col. 6 line 67 – Col. 7 lines 1-20 – Environmental monitoring unit (EMU) extracts various data from fibre channel cabinet, i.e. cabinet A, and processes the data to indicate such information as device information, operating status, faults, etc.]**, and

means for communicating processed data to an environmental control and monitoring unit through a secondary communications bus **[Martinez -- Figure 1, Col. 7 lines 17-20 and Col. 12 lines 48-51 – Processed data is used to generate a GUI which is then sent to monitoring unit, i.e. PC server, over another communications bus separate from the bus utilized within the cabinet, i.e. enclosure]**.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall et al. (U.S. 6,507,923) in view of Martinez et al. (U.S. 6,188,973).

Regarding claim 1, Wall teaches a fibre channel analyzer for analyzing the operation of a fibre channel arbitrated loop (FC-AL) to which a plurality of devices are connectable, said analyzer being adapted to be housed in an enclosure which, in use, houses at least one of said devices **[Wall -- Abstract, Figure 5 and Col. 2 lines 60-67 – Col. 3 lines 1-9 – Fibre channel analyzer is connected to Fibre channel loop within enclosure containing devices]** and comprising:

means for extracting and processing the extracted data from the fibre channel **[Wall -- Figures 5 and 7, Col. 5 lines 21-23, Col. 7 lines 56-67 – Col. 8 lines 1-17 and Col. 10 lines 21-27 – Multi-channel analyzer analyzes the channels of devices within a cabinet, i.e. enclosure and extracts and processes data from traces based upon status conditions and flags]**, and

means for communicating processed data through a secondary communications bus **[Wall -- Figure 5 and Col. 10 lines 8-27 – Data is communicated, i.e. uploaded, to remote host computer (90) via a second communications bus, i.e. Ethernet bus]**.

Wall, however, fails to teach an environmental control and monitoring unit.

Martinez, however, discloses communicating data from an FC-AL enclosure to an environmental control and monitoring unit, i.e. pc/server **[Martinez -- Col. 6 line 67 - Col. 7 lines 1-20 and Col. 9 lines 19-29]**.

Both Wall and Martinez deal with the same field of endeavor, namely, extracting and communicating data from a fibre channel loop enclosure system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the environmental control and monitoring unit, i.e. pc/server, as taught by Martinez into the invention of Wall, in order to provide a centralized monitoring system to quickly and accurately identify failing or failed components and to receive warnings to prevent catastrophic system failures **[Martinez -- Col. 11 lines 38-39 and Col. 12 lines 42-45]**.

Regarding claim 2, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the analyzer is arranged to be included directly within a FC-AL enclosure **[Wall -- Col. 7 lines 56-66 – Multi-channel analyzer is housed within the cabinet, i.e. enclosure]** thereby enabling continuous on-line monitoring of the FC-AL bus **[Wall -- Col. 10 lines 21-27 – Real time, i.e. online, monitoring of the bus]** and the provision of an early warning system of FC-AL bus performance degradation **[Martinez -- Col. 11 lines 35-39 – Early warning system generates a warning signal before catastrophic failures occur]**.

Regarding claim 3, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the analyzer is adapted to provide a limited analysis of the FC-AL bus **[Wall -- Col. 7 lines 56-67 – Col. 8 lines 1-17 – Analyzer provides limited analysis of the enclosure by monitoring a set, i.e. limited, number of channels]**.

Regarding claim 5, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the analyzer is located on a branch of the FC-AL **[Wall -- Figure 5 and Col. 8 lines 18-34 – Analyzer is on a branch, i.e. parallel, to the actual FC loop]**.

Regarding claim 6, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 5 above, including wherein the analyzer analyzes activity on the loop but does not contribute to loop delay **[Wall -- Figure 5, Col. 7 lines 56-67 – Col. 8 lines 1-17 and Col. 10 lines 21-27 – Analyzer monitors loop status but does not contribute to delay because it is not part of the actual loop (see claim 5 above)]**.

Regarding claim 7, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the analyzer comprises not more than two integrated circuit chips **[Wall -- Figure 7 (94) and Col. 9 lines 24-36 – Each of the channel logic circuits, i.e. analyzer, is comprised of a pair (2) of FPGA's, i.e. IC chips]**.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wall et al. (U.S. 6,507,923) and Martinez et al. (U.S. 6,188,973), as applied to claim 3 above, in view of Chin et al. (U.S. 6,000,020).

Regarding claim 4, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 3 above, but fail to explicitly teach wherein said information comprises the transmission of ARB (Arbitrate) and LIP (Loop Initialization) ordered sets.

Chin, however, discloses a storage management system which includes sending such common ordered sets as ARB and LIP to signal other nodes in the FC-AL loop **[Chin -- Col. 6 lines 61-64 and Col. 7 lines 13-17 and lines 22-26]**.

Wall-Martinez and Chin are concerned with the same field of endeavor, namely, Fibre Channel Loops.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the very common primitives of ARB and LIP, as taught by Chin into the invention of Wall-Martinez, in order to provide a set of commands which allow to control and reset the loop if failures or errors occur **[Chin -- Col. 7 lines 16-17 and line 26]**.

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall et al. (U.S. 6,507,923) and Martinez et al. (U.S. 6,188,973), as applied to claims 1 and 8 above respectively, in view of Sawdy et al. (U.S. 6,351,831).

Regarding claim 8, Wall-Martinez teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein said environmental control and monitoring unit **[Martinez -- Figure 6, Col. 5 lines 12-25, Col. 6 lines 12-17 and lines 30-39, Col. 6 line**

67 – Col. 7 lines 1-20 – Environmental monitoring unit (EMU) extracts various data from fibre channel cabinet, i.e. cabinet A, and processes the data to indicate such information as device information, operating status, faults, etc.] comprises an Enclosure Services processor **[Wall -- Col. 7 lines 66-67 – Col. 8 lines 1-2]**, but fail to explicitly teach communication through either a SCSI Enclosure Services (SES) or a SCSI Access Fault Tolerant Enclosure (SAF-TE) protocol.

Sawdy, however, discloses a FC-AL system which utilizes the SES protocol for communication **[Sawdy -- Col. 1 lines 46-50, Col. 2 lines 6-8 and Col. 3 lines 46-58]**.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the communication bus using SES protocol, as taught by Sawdy into the invention of Wall-Martinez, in order to utilize a protocol for communications that allows polling to determine device identities, slot assignments and configuration data **[Sawdy -- Col. 1 lines 21-24]**, thereby expanding the automatic and centralized management system of Wall-Martinez.

Regarding claim 9, Wall-Martinez-Sawdy teach the invention substantially as claimed, as aforementioned in claim 8 above, including wherein said analyzer receives from said processor a control page to specify levels of analysis and criteria **[Martinez -- Col. 11 lines 18-39 and Col. 12 lines 4-20 and lines 30-32 – GUI presents a control page to allow the user to control monitored devices and criteria, such as monitoring warnings, etc.]** and to send to the processor a status page containing processed data results from the analysis performed **[Martinez -- Figure 6, Col. 7 lines 11-20, Col. 9 lines 19-29 and Col. 12 lines 39-51 – Status page, i.e. shows components and status information]**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 571-272-3917. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJM
December 10, 2004

Primary Examiner
Art Unit 2143
William C. Vaughn